DOCUMENT RESUME

ED 218 820 EC 142 772

AUTHOR Balow, Bruce; And Others
TITLE Policy Options for Serving Autistic-Like Children in Rural Areas.
INSTITUTION Minnesota Univ., Minneapolis. Coll. of Education.
SPONS AGENCY Special Education Programs (ED/OSERS), Washington, DC.
REPORT NO UMRRC-R-8
PUB DATE [81]
CONTRACT 300-800-719
NOTE 46p.; Prepared by the Upper Midwest Regional Resource Center.

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Autism; *Classification; *Definitions; *Delivery Systems; Educational Methods; *Educational Policy; Elementary Secondary Education; Intervention; *Rural Education

ABSTRACT

The document reports several policy options that address the issue of educating autistic children in rural and sparsely populated areas. A description of autistic children relates numerous problems, confusions, and disagreements about the nature and course of the handicap including lack of agreement about definition and treatment. The most effective treatment purported by the authors is an eclectic educational program combining elements of behavior modification programs and psychoeducational procedures. Policy options for classifying and counting autistic children and for provision of service are described next, with advantages and disadvantages indicated. The federal classification of autistic children with "other health impaired" is seen to allow much flexibility in programing according to the individual child's behavior and therefore, has advantages not offered by any narrowly focused label. Categorical and generic programs of service are analyzed with specific attention to five issues: availability of service, quality of service, cost effectiveness, personnel preparation, and parent participation. The generic option is supported as the most advantageous in four of the five issue areas. The categorical program option appears to be better suited to parent participation. A list of references to selected professional literature completes the report. (Author/SB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

0408

UMRRC Upper Midwest Regional Resource Center

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
This document has been reproduced as received from the person or organization originating it.
Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

SCOPE OF INTEREST NOTICE
The ERIC Facility has assigned this document for processing to: EC RC
In our judgement, this document is also of interest to the clearinghouses noted to the right. Indexing should reflect their special points of view.

ED218820

POLICY OPTIONS FOR SERVING AUTISTIC-LIKE CHILDREN IN RURAL AREAS

Program Assistance
Report No. 8

EC 14[illegible]72

Department of Psychoeducational Studies • College of Education • University of Minnesota

POLICY OPTIONS FOR SERVING

AUTISTIC-LIKE CHILDREN IN RURAL AREAS

Bruce Balow, Ph.D.
Susan Raison, M.A.
Upper Midwest Regional Resource Center
Department of Psychoeducational Studies
College of Education
University of Minnesota
Minneapolis, Minnesota 55455

and

Jeffrey Raison, Ph.D.
Minneapolis Public Schools

This document is adapted from a report originally prepared for the Support System Project for Behaviorally Impaired, Department of Special Education, University of Nebraska-Lincoln. Development of the original version was supported by Project #81-203-02 of the Special Education Branch of the Nebraska Department of Education. This adapted version was produced and distributed with support from Special Education Programs, U. S. Department of Education, Contract #300800719 to the Upper Midwest Regional Resource Center. Views expressed herein are views of the individual contributors and do not necessarily represent the position or policy of the Support System Project, the Nebraska Department of Education, or the U. S. Department of Education.

Table of Contents

Page

Executive Summary 1

Issues in Educating Autistic Children 3

Policy Options for Classifying and Counting Autistic Children. 10

Policy Options for Educating Autistic Pupils in Rural Areas 15

The Categorical Option. 16

The Generic Option. 23

Table 1 - Service Functions for Autistic Pupils in Rural Programs. 29

Appendix. 30

Figure 1 - Federal Definition. 31

Figure 2 - Nebraska Definition for Behaviorally Impaired 32

Figure 3 - Minnesota Definition for Behaviorally Impaired 33

Figure 4 - Wisconsin Definition for Behaviorally Impaired 36

Figure 5 - Michigan Definition for Behaviorally Impaired 39

References 40

Executive Summary

In this report, several policy options are presented that address issues of educating autistic children in rural and sparsely populated areas. While directed specifically to children labeled autistic, most of the information is equally appropriate to low incidence and severely handicapped children.

A description of autistic children relates numerous problems, confusions and disagreements about the nature and course of this handicap including lack of agreement about definition and treatment. There is general agreement that autistic children commonly show severe delays in language, speech and social behavior and equally commonly show functionally retarded behavior. Our judgment of the most effective treatment is an eclectic educational program combining elements of behavior modification programs and psychoeducational procedures.

Policy options for classifying and counting autistic children and for provision of service are described next, with advantages and disadvantages indicated. In view of the recent change in federal regulations which removed autistic children from the severe emotional disturbance category and placed them with "other health impaired" and because of well established and appropriate reluctance to classify young children as emotionally disturbed, there is good reason to use this more open federal classification. The federal classification allows much flexibility in programming according to the individual child's behavior and therefore, has advantages not offered by any narrowly focussed categorical label.

Categorical and generic programs of service are analyzed with specific attention to five issues:

1. Availability of service
2. Quality of service
3. Cost effectiveness
4. Personnel preparation
5. Parent participation

For reasons that are detailed as those issues are discussed, we believe the generic option provides the most advantages in four of the five issue areas. The categorical program option appears to be better suited to parent participation.

A list of references to selected professional literature completes this report.

Issues in Educating Autistic Children

Autism is not easily defined. Since autism was originally described by Kanner in 1943, there has been considerable disagreement about which children should be labeled autistic. The major difficulties have been in deciding whether there is a difference between autistic children and schizophrenic children, whether autism is an early form of schizophrenia as was originally thought, and more recently, what the differences are between autistic children and children with severe language disorders and children with mental retardation. What seems to fuel the fire of these disagreements are the various definitions' implications regarding causation and solutions to the puzzle, including hope for future growth and change; i.e., does success lie in medication, in education, in family restructuring, etc. Adding to the difficulty of gaining understanding is the rarity of the disorder, generally estimated to show a prevalence of 2 to 4.5 in 10,000 children (Paluzny, 1979; Torrey, Hersch and McCabe, 1975; Lotter, 1966).

While some researchers may emphasize the perceptual disturbances in autism (Ornitz and Ritvo, 1976) and others may stress the impairments of integration between sensory information and memory (Rimland, 1964), there is some agreement as to the major characteristics found in most autistic children. According to Rutter (1978), these are: 1) a profound and general failure to develop social relationships, which may be seen in a peculiar aloofness in the presence of people, 2) severe language retardation with impaired comprehension, and frequently nonfunctional speech often including echolalia (repeating exactly what one hears), and 3) ritualistic, stereotyped behavior, or an insistence on sameness in the environment, seen in such behavior as endlessly lining up toys or collecting curious objects such as

tins cans or stones of a special shape. In addition, it is widely agreed that most autistic children are functionally mentally retarded, that the onset of autism occurs within the first 3 years of life and that it is more a physiological problem than a problem caused by home environment or psychological trauma. Other characteristics of some autistic children include self stimulation (such as rocking or flicking one's fingers in front of the eyes), self abuse (biting or hitting oneself), isolated role skills (such as memorizing all the locations of certain types of gas stations in town), and the presence of measured mental retardation (IQ below 70) in as many as 75% of autistic children (Rutter and Lockyer, 1967).

It is the association of autism with physiological problems, an accumulated realization that autism is not an early form of schizophrenia, and the functional similarities between autistic children and other children with developmental disorders such as mental retardation that prompted a change in the title of the Journal of Autism and Childhood Schizophrenia, the major journal in this area. The journal is now entitled Journal of Autism and Developmental Disorders, which the editors see as consistent with past research in the area, as well as with the recent federal actions to include autism in the Developmental Disability Act of 1975 and in the federal reclassification of autism under the "other health impaired" category of P.L. 94-142. Such reclassification is part of the history of questions concerning how autism should be defined. Clearly, those questions have yet to be completely resolved.

Assessment

In the attempt to define autism, various assessment systems in the form of diagnostic checklists have been proposed. The British Working Party

(Creak, 1965) proposed nine criteria for the diagnosis of schizophrenia in children. The two considered most indicative of autism were gross and sustained impairment of emotional relations with people and serious retardation with islets of normal or above normal skills. The nine criteria were problematic because they seemed, on the one hand, to pertain to all psychotic and severely disturbed children, not just autistic, and, on the other hand, to be too specific, including such criteria as intense panic outbursts, which were not always present in autistic children. Rimland (1965) also proposed nine major symptoms, his two primary signs of autism were autistic aloneness and an insistence on being left alone in an unchanging environment. Rutter (1969) reported on a "multilaxial" system proposed for psychiatric disorders by the World Health Organization, the axes being dimensions such as intellectual functioning, which proved too ambitious an undertaking to carry out. Under this system, five diagnostic signs of early infantile autism were proposed, similar to those previously listed.

DeMyer, Churchill, Pontius and Gilkey (1971) reviewed five assessment schemes for diagnosing autism and, while seeing areas of substantial agreement, found no more than 35% overlap between systems. A group of children could be diagnosed as autistic according to one system and not according to another. To date, there is no well established assessment tool for diagnosing autism.

While the questions of definition and diagnosis have not yet been answered, practical reasons for assessment remain, for example, for purposes of planning education programs. On a practical level, it becomes clear that autistic children are not a homogeneous group and need to be planned for differentially. One program serving a rural area in Iowa has

decided to focus on two areas of assessment, intellectual functioning and language functioning, which results in placement into one of four subgroups for programming (Furlong, n.d.). The subgroups are high IQ/fluent speech, high IQ/poor speech, low IQ/fluent speech, and low IQ/poor speech. (It should be pointed out that these designations mean, for example, high IQ for this population, not for children in general). There is evidence to suggest that IQ is a good predictor of later achievement and adaptive living skills in autistic children (Bartak and Rutter, 1976), thus, there may be good reason to include some IQ testing, using nonverbal tests if necessary, as part of initial assessment. Since language is central to the tasks of school, a functional assessment of this area, based on child observation and parent information, also seems an essential part of assessment.

While other programs may not have as explicit a model for subdividing autistic children into groups on the basis of assessment, all programs for autistic children use their own questionnaires, checklists, or observation procedures to gather information on levels of functioning and behavior. The point is that assessment, in practice, is dependent on the particular program in the area where an autistic child resides. If there is no program for autistic children in the immediate area, assessment is likely to follow the procedures used for any other child who is severely handicapped.

Treatment

To be most effective, treatment programs should involve parents fully in the planning and implementation of educational activities. Progress with autistic children tends to be slow and, like all children, they benefit from a consistent approach at home and at school, thus, cooperation between parents and teachers is important. In addition to parent involve-

ment, most treatment programs attend to self help skills (such as toileting and dressing), language training, social skills, preacademic and academic development, and reducing self-stimulation and self-abuse. The specific treatment program would, of course, depend on the behavior and skills of an individual child. Autistic children often have difficulty generalizing beyond whatever specific skills they are taught. They may learn how to respond to a direction such as "sit down" from a particular adult in a particular room, but not be able to respond to the same direction given by a different adult, or given in a different location. This concrete and often mechanical style of learning means that it is important for any treatment program to develop motivation to learn and some spontaneity and transfer in use of skills.

The major types of treatment programs have followed various theoretical approaches. These have been psychoanalytic, exemplified by Bruno Bettleheim's Orthogenic School in Chicago, behavioral, exemplified by Lovaas (1976) and colleagues at UCLA and Kozloff (1973) in St. Louis; and psychoeducational, exemplified by Stuecher (1973) at the University of Minnesota and by Eric Schopler's program in North Carolina (Schopler, Reichler and Lansing, 1980). Biological approaches in the form of drug therapy (Corbett, 1976) and megavitamin therapy (Rimland, Callaway and Dreyfus, 1978) have also been tried with no particular success. Representatives of these approaches are often quick to criticize each other, but it does seem clear that behavioral techniques which use reinforcement and control of the environment are essential to decrease self abuse and self stimulation and to increase attention so that learning can occur. The advantages of psychoanalytic and psychoeducational approaches are that they stress building relationships with people,

so lacking in autistic children, and concentrate on the emotional aspects of development. The psychoeducational approach also focuses on functional needs in a developmental context.

As with the topics of definition and assessment, no clear treatment predominates as the most effective in educating autistic children. The problems of definition, of course, can confuse those who wish to compare programs based on reports of success, since different types of autistic children may be helped by different treatment techniques, and typically the children are not adequately described in such reports. Increasingly, also, programs are less insistent on purist methodology; it is common now to see reasonable blends of techniques from behavioral and psychoeducational origins.

Program Organization

Autistic children have been served all along the continuum from residential treatment centers to mainstreamed regular education classes in private as well as public schools. Bettleheim's Orthogenic School is an example of a residential school. The League Schools of Brooklyn and Boston, and the Judevine Schools in Missouri and Illinois are examples of day schools. Dunlop, Koegel and Egel (1979) and Almond, Rodgers and Krug (1979) have reported on how to gradually mainstream autistic children, either by putting them into regular classrooms with paraprofessional aides or by having regular education children come into their special classrooms. The University of Iowa has developed a combination of a six to eight week inpatient diagnostic period, at a center, followed by periodic checks to local school districts and parents by an outreach worker (Lowry, Quinn and Stewart, n.d.). In line with the nationwide movement toward least restrictive placement of handicapped persons, including deinstitutionalization, more children

are now being educated in day schools and special classes as opposed to residential and hospital settings.

Since the incidence of autism is so low, autistic children served in public schools are often placed in classes for emotionally disturbed children or in classes for retarded children, unless, of course, there is a high enough concentration of autistic children in a metropolis to make a special class for autistic children cost effective (and assuming that educational circumstances indicate it is the most appropriate for the children). A consulting teacher model has been tried for a number of years in Vermont and more recently in other states (Deno, 1972). An Iowa program uses a "behavior design instructor" who goes to local districts, surveys available resources and helps local schools to set up interventions for the children involved. These interventions may involve the behavior design instructor as a co-teacher, as a trainer of aides, or as a coordinator and occasional supervisor.

The choice of program model is dependent on the services already available in a district, the number of autistic and other handicapped children in the area, and numerous other cultural, geographic and climatic, and socioeconomic factors (see Helge, 1979). The model choice is also dependent on the child's severity of behavior, age and the wishes of the parents regarding whether they choose to have the child at home. There is nothing inherent in a particular model in and of itself which would make it effective or not effective. The challenge is to make creative use of the resources and circumstances available to fit the functional needs of the particular child.

Policy Options for Classifying and Counting Autistic Children

The fundamental reascn for classifying, or categorizing, school children who are taught to be handicapped is to take advantage of available state and federal financial reimbursements related to excess costs of providing education. Arguments about the value of such classification for purposes of education do not stand up to scrutiny. The available evidence, while subject to criticism for weaknesses in research design and incomplete reporting, nonetheless provides little support for the efficacy of categorical programs of education for handicapped children. See, for example, Carlberg and Kavale (1980) and Kavale (1981).

Since P.L. 94-142, state and federal regulations now call for individual education plans (IEPs) for all children considered handicapped for purposes of education. Because the IEP is the specific guide to the child's educational placement, curriculum, materials, methods, objectives and expected outcomes, the major classification concerns beyond reimbursement are that the classification not knowingly distort the truth (especially for reasons unrelated to the child's needs, such as, "we have no program here for that category of child") and that the evidence can support the classification chosen.

The Behaviorally Impaired Classification

Some state regulations include autistic children with the classification of behaviorally impaired. That is a reasonable position to take in view of the similarities between the known characteristics of autistic children and of behaviorally impaired children as described in those state definitions.

(See, for example, Figures 1 through 5, appendix). Further, despite the continuing confusion and disagreement over the differential diagnosis of autistic children and the child behavior essential for such a diagnosis (Balow, 1981) it is clear that a relatively broad classification focussed on deviant behavior is not inaccurate. It will not be precise enough to satisfy those who believe autism can be defined narrowly, nor those who believe that a separate category will lead to better educational programs.

The problems with the behaviorally impaired classification are not large and may not be critical. Few children will be in any jeopardy based on the classification choice, so long as it is not narrowly categorized. However, there is a well recognized reluctance on the part of school personnel to label a child emotionally disturbed, autistic or any euphemism that stands for those labels. The behaviorally impaired label focuses attention primarily on the deviant behavior of a child, emphasizing that aspect of the problem and neglecting, in the label, other important characteristics such as functional retardation and language delay.

Children with autistic features are often labeled severe learning disabled, language disordered or delayed, or mentally retarded, in order to provide appropriate service based on what the professionals and parents involved judge are the most salient characteristics of the child. The potential for problems with the behaviorally impaired classification is largely in the possible stereotyping that could lead to neglect of needs other than disturbed behavior.

Presumably, also, rural states are not overwhelmed with numbers of children placed in the behaviorally impaired (or emotionally disturbed) category. In a number of predominantly rural states, only about ½ of one

percent of children have been so classified for special education purposes in recent years, when the standard estimates call for around 2 to 3 percent of children to be so categorized. Given the much lower than expected usage of the category, it is clear that there is more than sufficient room to include children with autistic features.

The question is, will children who might fit the description fail to receive special education because of reluctance to label them behaviorally impaired. We doubt that would occur with autistic children because their behavior problems are usually severe enough to require special service.

The only question remaining relates to categorical identification, or using a more narrow label than is required, and whether such a categorical label conditions the nature of programming for educational interventions. We believe that labels do influence programming and detail that issue in a later section entitled, "Policy Options for the Education of Autistic Students in Sparsely Populated States."

The Other Health Impaired Option

The federal regulation which now includes autistic children with other health impaired may have certain advantages not afforded by the behaviorally impaired classification.

First, it makes clear, on its face, what many people believe about autistic children: that the origin and nature of the handicap is not known, but that the child is clearly handicapped. Secondly, it is a benign category, carrying with it no stereotypes of a negative nature, although it is likely that wide use of this classification for autistic children would, in time, create such stereotypes. Third, because of its nature, the label

has much greater appeal to parents and, to the extent that the label makes a difference in school program or teacher behavior, it would be hard to find a more positive label with which to categorize autistic children.

If the label has any effect on the count of handicapped children in the state, the effect would probably be to increase the total slightly, for the aforementioned reasons, but also to somewhat muddle the clarity of the behavioral information communicated by those numbers. That is, autistic children are, indeed, behaviorally impaired. To count them as such helps to communicate an important functional problem for schools when the numbers are aggregated at state level. To count autistic children as other health impaired along with perhaps a few rheumatic fever children, a few leukemia children, a few cerebral palsied children, or other types of handicapping conditions, communicates less clearly the nature of the functional problems facing the local districts and the state. That, in turn, has unfortunate effects on policy decisions translated into legislation and regulations.

Summary

Advantages and disadvantages have been presented of the two classifications for autistic pupils that clearly seem reasonable to consider. It would appear to make little difference which is applied when financial or programmatic grounds are used.

The important issue is not the particular choice of label words. It is, rather, that there are advantages to broad, flexible labels in fiscal and program matters that are lost when narrowly based categories are established. If the behaviorally impaired classification was determined to be

no longer feasible (due to federal shifts in classification rules or state policy changes), and if the category called "other health impaired" were not available in a given state, another broad grouping that depended upon appropriate criteria would do as well. For example, "multi-handicapped" could serve well the functional needs of autistic children and could, equally well, reflect characteristics or attributes of the child that are of central importance to decisions about delivery of service.

Policy Options for the Education of Autistic Students in Sparsely Populated States

Introduction

Providing to autistic students a minimally adequate education, to say nothing of an appropriate education, is a challenging task. The identification and assessment of autistic children is often a confusing ordeal for parents and a complex puzzle for professionals. The assessment and diagnosis of autistic children requires the services of trained diagnosticians. Due to the rarity of this disorder, it is most likely that personnel with extensive experience with such children are only found in urban centers of population. Rural and sparsely populated areas are at a distinct disadvantage when attempting to provide educational services to autistic students. First, rural areas lack sufficient numbers of autistic children to establish cost effective programs in each community. Second, they lack properly trained, experienced staff to organize effective programs and teach in these programs. Third, the prevalence figure of 2 to 4.5 autistic children in 10,000 (which may well be an overestimate) provides reason to doubt that a separate program would make sense, even if the staffing problem could be solved.

The difficulty of providing programs for autistic students is further complicated by the heterogeneity of autistic students. The label autistic may not help one in picturing the student and his or her educational needs. Autistic students may have fluent speech or no speech at all. Behavior from one to the next may be highly variable; one student may be self abusive, another will not; some are incessantly verbal while others are mute. Most will function as a retarded child, most will show some type of language

problem and most will show problems in social behaviors, but the great differences among students who have been labeled autistic raise serious questions about the wisdom of using that label as a basis for planning and organizing their educational programs.

Once the child is identified, assessed and labeled, it is not always clear which teaching methodology is most appropriate. Within the fields of special education and psychology and among parent groups, there are often strong opposing beliefs and philosophies on the nature of the problem, appropriate curricula and instructional methods, and optimum patterns of organization for service delivery. Along with such matters, policy makers must be vitally concerned over cost/benefit issues as well.

Policy Option 1

The Categorical Approach to Service and Licensure

1) Availability of Service

Autism is a rare disorder. According to Lotter (1966) and Torrey, Hersh and McCabe (1975), the prevalence of autism is between 2.0 and 4.5 per 10,000 in the 7 to 10 year old age range. The difference in number depends on how rigorously the diagnostic criteria are applied. Thus, in a rural state where the population density in each county is low, it is highly unlikely that within most counties of the state there would be more than one autistic student. In our work in Minnesota, over the past decade, we have not been able to find anything like four children in 10,000 identified as autistic, despite efforts to search out such children. In urban and suburban areas with high concentrations of population, of course, there might be enough children to form categorical groups; but even in high population

areas, were the smaller prevalence figure to be used, it would undoubtedly influence policy. However, even applying the higher ratio, if the categorical approach to service was implemented, it would be highly unlikely that students could be served in a classroom with other autistic students unless many of the students were transported long distances, or were maintained in a residential school.

As mentioned previously, autistic students are a very heterogeneous group; that is, there are many and wide differences within the group. While it may be possible that a few autistic students could be located in one area, it is nearly certain that their educational needs would differ greatly, depending on their level of skill in self care, socialization, language and speech, and school achievement. The mere fact that several children labeled autistic live in reasonable geographic proximity does not necessarily mean that there would be an appropriate match of their educational or developmental needs. If a policy were established that required placement of autistic children in categorical programs, it is most probable that the end result would be the development of numerous scattered programs that would operate on a one-to-one basis, that is, one teacher for each student. A teacher or aide would be assigned to one student and in the event that similarities existed among the students (age, language skills, compatible behaviors), a classroom program might be developed.

When there are sufficient numbers of students within a geographic area, regional and cooperative service delivery models are possible, but that alone does not make an aggregate site using a categorical approach the best choice. It only makes such a choice economically feasible. Segregated special classes are highly dependent on the location of the students,

geographically, from a central site. When the distance from a central site increases, the time spent in a bus may alone outweigh any advantages of the centralized site. Also, as the distances from a central site increase, so does the costs for transportation.

2) Quality/Appropriateness of Service

It has been frequently argued that the placement of autistic students with students labeled emotionally disturbed or mentally retarded is not appropriate. While there may be very strong advocacy for a categorical approach to serving autistic students, at present there is no evidence to suggest that grouping students solely on the basis of their identification as autistic improves the quality of education or alters the program or the educational outcomes.

Due to the heterogeneity of functional behavior among autistic children coupled with their common needs for assistance and development in socialization, language, and self care, the segregated special class may offer little that is different from programs directed at other categories of severely handicapped children. There is tremendous diversity within programs for autistic students and a fair degree of similarity between some of these programs and programs for students not labeled autistic, but having similar functional problems.

At present, there are many areas of disagreement between those who emphasize a behavior modification approach and those who use a psychoeducational approach, or other approaches, to treating handicapped students. It is possible that professionals and parents may more readily align themselves with such educational strategies than with the particular population of a classroom.

However, it may be argued that programs that are categorical would be designed with autistic students in mind and could be tailored to their individual needs. Also, when staff work together in a categorical program, opportunities are provided to develop and utilize unique curricula and to share information about successes and failures. It might be assumed that this would improve the quality of service.

It is possible that the categorical approach may help to focus a knowledge base for teachers, particularly when they are grouped in a centralized location. However, adopting a categorical approach in a rural area may cause the development of extremely small programs with 1 or 2 students and the net effect may be the isolation of staff members from other professionals with reduced opportunity to share ideas and improve teaching skills. The result may be a decrease in the quality of service provided for autistic students.

With the current requirement that IEPs be written for every handicapped child in school, utilizing team contributions to that IEP, it is quite likely that categorical special classes no longer have any advantage of specific response to child needs, if they ever did.

Quality of schooling is a function not only of the teacher and support staff, but also of the environment for learning--including models for behavior. It is certain that categorical programs are a serious disadvantage for autistic children who need good models of language, social behavior, and self care from which to learn.

3) Cost Effectiveness

The categorical model of serving autistic students could be more costly than some alternative models in predominantly rural areas. It is most

probable that new staff would have to be hired for new categorical programs. Teachers would be serving very small numbers of students, making the cost per student relatively high. In a non-categorical, or generic approach, a limited number of students could enter already existing classrooms with existing equipment and staff. Additional funding could be used to provide specific, as needed, in-service training to personnel in existing programs.

If central sites are necessary to collect sufficient students for a categorical program, additional transportation costs would need to be budgeted. Costs of vans or other vehicles, drivers and fuel would increase markedly.

A categorical program usually leads to considerable pressure to establish licensure and, in turn, state supported college programs for personnel preparation, regardless of any demonstrated need for knowledge and skills unique to the new category. These programs serve small numbers of people, giving rise to serious problems of cost effectiveness at the college level also.

4) Personnel Preparation

A strict categorical approach may provide personnel with a greater opportunity to gain more intensive on the job training with autistic students. The requirement of a specific certification would place great pressure to develop new training programs on state colleges and universities, at considerable risk to quality of preparation, since the staffing of such a low demand program would necessarily be quite thin. A further problem arises in that the urban universities would logically be most suited to establishing such training, by reason of their facilities, support staff and surrounding population of children.

The problem of training quickly becomes apparent. Those who live in rural areas have limited access to urban training programs. Teachers who live in urban areas near university centers are nearly always reluctant to move to rural areas for a job. Outreach to rural school personnel by colleges and universities is not often systematic or well developed, due to the constraints of time, travel, weather and access. Thus, while specialized training may be desirable from a clinical point of view, it is possible that the development of training programs may not assure the placement of qualified personnel in rural areas. Such placement is determined, in large measure, by factors other than availability of jobs.

A possible way of encouraging rural placement of teachers for autistic students would be to recruit internally within rural districts. However, while the placement of the individual would then be less dependent on willingness to move to a different location, delivering the training to such persons becomes more difficult for the reasons already mentioned.

A specialized license might affect manpower needs in the following ways. A specific license may add more status to the position and attract new, talented individuals to the job of working with autistic students. However, it is also possible that the license may be seen as a rigid entry point into special education. Due to the limited number of positions in autism, and the often high turnover rate in these jobs, individuals may be less willing to commit time to train for careers in this area. An individual who might be licensed solely in autism may not be as helpful to a rural district over a period of time. Rural districts would benefit from more flexible certification and licensure, due to limited resources, small numbers of students and an unstable mix of categorical labels on children

whose functional needs are, in total, quite stable. Licensure that is less specifically categorical allows schools to respond to existing and changing needs within the district or cooperative without having to release or recruit new personnel.

Finally, as mentioned previously, a categorical approach may encourage the development of small, isolated programs. The training of higher skilled individuals and their placement in environments that would be less stimulating and lacking in understanding and support from colleagues, may encourage job dissatisfaction and higher turnover rates. In the long run, lack of continuity may be more detrimental than any initial advantage from more specialized personnel.

5) Parent Involvement

A categorical approach to serving autistic students might encourage greater parent participation and child advocacy than other, more general labels would. Parents of students in programs specifically for autistic children are better able to organize to advocate for the educational needs of their children. Categorical identification provides the nucleus of an "in group" that can rally to encourage and support one another, educate one another and provide the forum for concentrated efforts which sustain the organization and the individuals who comprise it.

Categorical identification provides parents a ready affiliation with state and national organizations which provide additional impetus to building and maintaining the association, as well as providing information and support for better understanding of the problem, emotional support for the individuals involved, advice for daily living and encouragement to advocacy activities, among other things.

Policy Option 2

A Generic* License and Functional Approach to Service

1) Availability of Service

One of the most easily recognized advantages of a generic license to teach severely handicapped children is the flexibility in local decisions that it allows. Not only are autistic children few and far between in rural, sparsely populated states, but all other categories of severe handicap are equally rare, or nearly so. Attempts to build programs for such children, when done on a categorical base, usually are small, expensive, ineffective and isolated, or turn into residential centers serving an entire state, with the many problems attendant on residential schools for children.

The alternative to categorical programs which deal only with autistic children is some type of generic licensure for the teacher and decisions about children based on functional need. If the description of autism with which we began this document is even close to being accurate (and our reading of the professional literature, plus our own observations from over 10 years experience with autistic children, argue that it is), then the most appropriate program for a child will be one that is individually tailored for his specific needs. However, there will be a high probability that any autistic child will behave as if retarded, need much help with language and speech, need self-help and socialization skills, as well as training in preacademic and prevocational skills.

The opportunity to receive appropriate instruction in those areas can be found in many programs for retarded children or severely emotionally disturbed or behaviorally impaired children. Whether the method of service

*Generic - defined by Webster as, "relating to or characteristic of a whole group or class; general". In this instance, referring to a license to teach severely handicapped children.

delivery is through a resource room to which handicapped children are assigned for part of the school day according to need, through a consulting teacher who visits the mainstream classrooms to which the handicapped child is assigned for his primary placement, a generic special class, or a "homebound" program, the specialist teacher is able to effectively respond to 95% of the functional needs likely to arise, because all such teachers learn essentially similar skills in their professional preparation.

While many school districts, cooperatives or educational service units would not have sufficient autistic children resident in the area to establish a cost effective categorical program, most would have a large enough number of children whose functional needs are similar, no matter what the diagnostic label, to establish a generic program for severely handicapped children.

Availability of service would be greatly enhanced by generic licensure and programming. As Helge (1981) has shown, 67% of all schools in the U.S. are in rural areas and the majority of unserved or underserved handicapped children are in these areas. Among the major problems she identified, by surveying state agency officials, was the difficulty of attracting and retaining qualified staff in rural areas (94% of the states) and long distances between schools (83% of states). These two factors clearly affect availability of service to children. Both can be mitigated by generic licensure.

2) Quality of Service

There is no evidence that quality of service is related to labels on the children or the teachers. The nature and level of professional prepara-

tion for the specific tasks that need to be done, together with selected personal characteristics of the teacher do appear to make a difference. The intelligent, well organized teacher who is something of a taskmaster, who keeps the students on task for as long as possible, has been shown to affect the quality of instruction.

Presumably, there are no identifiable differences in the nature of the professional skills a teacher must learn in order to respond appropriately to children labeled autistic, as against children labeled retarded or emotionally disturbed. All must know how to organize and manage a properly sequenced curriculum, subject or skill, and lesson. All must know how to manage behavior and to encourage development.

The critical factors in a generic program are almost certainly the same as those of a categorical program. The professionals must have professional skill and, with very troubled children especially, they often need nonprofessional assistants to help manage the physical control of those children who are not under verbal control or self control.

3) Cost Effectiveness

Under the assumption that generic licensure allows greatly increased flexibility in placement of children, professional load and need for transportation, the costs to the local district or cooperative may be expected to be much less than for categorical programming. Savings would be likely in expenditures for facilities, materials, staff and transportation.

To the state, there would be additional savings in respect to teacher education programs as well. Specific additions to existing programs might be needed in a generic licensure approach; those could be identified and should be obtainable at little or no cost compared to a full-blown new program for a new license.

4) Personnel Preparation

By contrast with a categorical model, a generic approach places fewer demands on teacher preparation programs for highly fractionated methods courses that often overlap greatly. If the preponderance of functional needs of autistic pupils is essentially the same as those of moderately and severely retarded children, which we believe to be the case, then the preparation of professional educators to teach such children is also going to be highly similar. Out of a program of professional preparation aggregating, say, 60 semester hours, perhaps 85% to 90% would logically be identical for those planning to teach either group and 15% or less differentiated, according to specific target.

By the same reasoning, school districts or cooperatives that have an established program for retarded pupils could, with limited in-service work specifically targeted on autism, prepare their teachers for effective instruction of autistic pupils.

However, no matter what type of delivery system is utilized, the school district will almost certainly find it necessary to reduce the ratio of pupils to teachers if the autistic child is to be properly managed and instructed, since such children are often not under normal verbal control. Teacher aides, or other non-professional personnel, often are employed for that purpose. While this can be an efficient means of increasing program effectiveness, the aides, to be most useful, also need appropriate training in management of behavior, characteristics of autistic children and in the various curricula that are being applied in the program.

For all personnel associated with programs for autistic pupils, it is much easier, and most cost effective, to provide highly specific in-service

education in the local district than to establish resident programs at one or more universities in the state. As mentioned earlier here and pointed out in Helge (1979), teachers who attend urban universities do not want to move to rural small towns for a job, and those who teach in rural towns find it extremely difficult to travel to urban universities for additional training. As a consequence, formal rules that demand levels or types of training not seen as critical to real world circumstances are typically ignored, faked or simply rejected.

5) Parent participation

Generic programs are at a disadvantage in matters of parental involvement and participation because all of the state and national parent support organizations are organized along strictly categorical lines. The flow of information from such organizations is strongly oriented to the category label and there often is resistance to subordinating the label to collective action through cooperation and coordination on common problems with other categorical groups.

Thus, at the local school district level, a generic program might have to work harder to engage the parents of children of varied labels in sustained activities to support and participate in the program and to help educate those parents in ways that national and state parent organizations would otherwise do. It would be difficult for local school personnel to fully and effectively carry out the parental education and support roles of national and state organizations and to build and sustain all studies of mutual support among parents.

A policy decision to support, or allow, generic programs would want to also make provisions for parental partnership, beyond the requirements of

P.L. 94-142, in those programs. At the least, it would be important to establish the expectation for continuing education of parents and school personnel in matters relating to the local program.

Summary

A summary comparison of some standard functions often used in rural, small town and urban school districts to provide instruction to handicapped children is presented in Table 1. We have listed a continuum of delivery functions from inservice training to residential schools and judged those functions as to generic or categorical, need for child classification for eligibility, transportation, services provided and how feasible and costly the function is in rural districts.

Table 1: Service Functions for Autistic Pupils in Rural Programs*

	Function	Program Type	Need for Eligibility/ Labeling	Need for Additional Transportation	Special Service Provided	Feasibility for Single Rural District	Relative Cost
1.	Inservice Training on Classroom Management Procedures	Generic	No	No	Inservice Training	High	Low
2.	Use of Paraprofessional Staff to Assist in Behavior Control and Instruction	Generic	No	No	Consultation by Paraprofessional	High	Low
3.	Use of Professional Staff to Assist Regular Classroom Teachers in Behavior Management	Generic	Optional	No	Consultation by Professional	High	Low
4.	Supplementing Consulting Teacher Service with Direct Service by an Aide	Generic	Optional	No	Consultation by professional plus direct service by paraprofessional	High	Low
5.	Responsibility Shared between a Regular Teacher and a Special Resource Room Teacher	Generic	Yes	Optional	Consultation plus direct service by professional	High	Low
6.	Special Class (Day School) Placement	Categorical	Yes	Yes	Direct service by paraprofessionals and professionals plus professional consultation	Low	High
7.	Special Class (Residential School) Placement	Categorical	Yes	Yes	Direct service by paraprofessionals and professionals plus professional consultation	Low	High

*Adapted from Frank H. Wood, unpublished manuscript, Dept. of Psychoeducational Studies, University of Minnesota, Mpls.

APPENDIX

Definitions of Emotionally Disturbed/Behaviorally Disordered Children and Adolescents

Figure 1

Federal Definition of Emotionally Disturbed

Children and Adolescents

Federal Register, Vol. 42, No. 163, August 23, 1977

Seriously Emotionally Disturbed is defined as: The term means a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree, which adversely affects educational performance.

(a) An inability to learn which cannot be explained by intellectual, sensory, or health factors;

(b) An inability to build or maintain satisfactory interpersonal relationships with peers or teachers;

(c) Inappropriate types of behavior or feelings under normal circumstances;

(d) A general pervasive mood of unhappiness or depresssion; or

(e) A tendency to develop physical symptoms or fears associated with personal or school problems.

The term includes children who are schizophrenic. The term does not include children who are socially maladjusted, unless it is determined that they are seriously emotionally disturbed.

Figure 2

Nebraska Definition for Behaviorally Impaired
(Emotionally Disturbed)

Nebraska Definition (Bill 769, passed and signed April, 1980)

Behaviorally impaired shall mean children with a serious condition exhibiting one or more of the characteristics specified in this subsection in sufficient frequency, duration, or intensity to require intervention for educational, social, or emotional growth and development. The term shall include children who are autistic. The behavioral impairment cannot be explained by intellectual, sensory, or health factors. The characteristics of behaviorally impaired children include:

(a) An inability to build or maintain satisfactory interpersonal relationships with peers and teachers;
(b) Inappropriate types of behavior or feelings under normal circumstances;
(c) A general pervasive mood of unhappiness or depression; or
(d) A tendency to develop physical symptoms or fears associated with personal or school problems.

Figure 3

Minnesota Pilot Definition and Behavior Criteria
For Emotional/Behavioral Disorders

Within the educational setting the existence of an emotional/behavioral disorder is determined by the team specified in State Board of Education rule 5 MCAR § 1.0125 and, when necessary, P.L. 94-142 § 121 a. 344. Minimally, the team must substantiate that all six of the following elements exist and verify that the condition:

1) Significantly interferes with the student's or other student's educational processes;
2) occurs in more than one educational setting;
3) has not been ameliorated (improved) by at least two documented interventions applied in the regular school setting;
4) necessitates the provision of special education and services;
5) is chronic (continuing over a long period of time) and intense (characterized by high frequency, long duration, and/or high strength); and
6) is characterized by one or more of the five behavior criteria listed below:
    a. Difficulty in building or maintaining satisfactory interpersonal relations with peers, teachers and/or school personnel.

        Examples of characteristics of this behavior pattern:

        Argumentative
        Avoids interaction with peers or others

Examples of behavior (cont.)

Does not trust others
Excessive dependency
Excessively controlling of others
Inappropriate sexual behavior
Is fearful of others
Isolation or social withdrawl
Physically or verbally abusive
Self-effacing
Volatile relationships

b. A general pervasive mood of unhappiness or depression (wide-mood swings).

Examples of characteristics of this behavior pattern:

Apathetic
Despair
Excessive anxiety
Excessive crying
Hopelessness
Immobilized
Preoccupation with negatives
Rapid mood swings
Suicidal, self-destructive

c. A tendency to develop a variety of physical symptoms or fears associated with personal or school problems.

Examples of characteristics of this behavior pattern:

Absences and tardiness due to illness
A persistent fear related to:
  a specific subject area, PE
  failure/success
  testing
  new situations:
    authority figures
    females
    males
    touch
Chemical abuse/dependency
Complains of not feeling well
Hygiene problems (neglect)
Nervous habits such as tics, nail biting, flinching
Refusal to attend school
self-mutilating
Stress related illnesses, such as:
    asthma/allergies

Stress related illnesses (cont.)
- headaches
- nausea/vomiting
- rashes, hives
- ulcers/colitis

Truancy due to illness
Unusual sleep or eating patterns
Weight problems

d. Inappropriate behaviors or feelings under normal circumstances.

Examples of characteristics of this behavior pattern:

Affect which is incongruent or highly changeable
Behavior/development not age appropriate
Disorganized
Excessive/antagonizing behavior
Hostility
Inappropriate laughter, crying or sounds
Lying, stealing, cheating
Odd or unconventional behavior
Overreacts
Refuses to do school work or respond
Rigid - not able to make changes or transitions
Seeks attention in inappropriate ways - language, actions
Self-stimulation
Temper tantrums
Threatens others
Unanticipated violence or destruction

e. Difficulty (underachievement) in learning given adequate educational opportunities which cannot be explained by intellectual, sensory, health, cultural or linguistic factors.

Examples of characteristics of this behavior pattern:

Assignment problems:
- incomplete, late
- complete but not handed in

Behind in credits earned
Change in organizational skills
Change in rate of skill acquisition
Change in school attendance pattern
Day dreaming
Experienced a life crisis such as death, divorce, etc.
Experienced a life threatening event such as illness, and accident or crime

Examples of characteristics (cont.)

Inability to stay on task
No longer follows classroom rules and procedures
Normal achievement rate followed by regression
or failure to progress
Retention problems
Significant decline in grades earned
Quits/gives up

The team responsible for verifying these six elements must also determine that the behavior is not primarily the result of intellectual, sensory, health, cultural or linguistic factors. (No student shall be assigned to a program for students with emotional/behavioral disorders for disciplinary reasons only).

Figure 4

Wisconsin Definition for Emotional Disturbance

PI 11.34
Eligibility Criteria
Handicapping Condition
Emotional Disturbance

1. Classification of emotional disturbance as a handicapping condition is determined through a current, comprehensive study of a child, ages 0 through 20, by an M-team.

2. Emotional disturbance is characterized by emotional, social and behavioral functioning that significantly interfers with the child's total educational program and development including the acquisition or production, or both, of appropriate academic skills, social interactions, interpersonal relationships or intrapersonal relationships or intrapersonal adjustment. The condition denotes intraindividual and interindividual conflict or variant or deviant behavior or any combination thereof, exhibited in the social systems of school, home and community and may be recognized by the child or significant others.

3. All children may experience situational anxiety, stress and conflict or demonstrate deviant behaviors at various times and to varying degrees. However, the handicapping condition of emotional disturbance shall be considered only when behaviors are characterized as severe, chronic or frequent and are manifested in two or more of the child's social systems, e.g., school, home or community. The M-Team shall determine the handicapping condition of emotional disturbance and further shall determine if the handicapping condition requires special education. The following behaviors among others, may be indicative of emotional disturbance:

   a. An inability to develop or maintain satisfactory interpersonal relationships.

   b. Inappropriate affective or behavioral response to what is considered a normal situational condition.

   c. A general pervasive mood of unhappiness, depression or state of anxiety.

   d. A tendency to develop physical symptoms, pains or fears associated with personal or school problems.

   e. A profound disorder in communication or socially responsive behavior, e.g., autistic-like.

   f. An inability to learn that cannot be explained by intellectual, sensory or health factors.

Figure 4 (continued)

g. Extreme withdrawal from social interaction or agressiveness over an extended period of time.

h. Inappropriate behaviors of such severity or chronicity that the child's functioning significantly varies from children of similar age, ability, educational experiences and opportunities, and adversely affects the child or others in regular or special education programs.

4. The operational definition of the handicapping condition of emotional disturbance does not postulate the cause of the handicapping condition in any one aspect of the child's make-up or social system.

5. The manifestations of the child's problems are likely to influence family interactions, relationships and functioning or have an influence on specific individual members of the family. It is strongly recommended that extensive family involvement or assistance be considered in the evaluation and programming of the child.

6. The handicapping condition of emotional disturbance may be the result of interaction with a variety of other handicapping conditions such as learning, physical or mental disabilities or severe communication problems including speech or language.

7. An M-Team referral for suspected emotional disturbance may be indicated when certain medical or psychiatric diagnostic statements have been used to describe a child's behavior. Such diagnoses may include but not be limited to autism, schizophrenia, psychoses, psychomatic disorders, school phobia, suicidal behavior, elective mutism or neurotic states of behavior. In addition, students may be considered for a potential M-Team evaluation when there is a suspected emotional disturbance, who are also socially maladjusted, adjudged delinquent, dropouts, drug abusers or students whose behavior or emotional problems are primarily associated with factors including cultural deprivation, educational retardation, family mobility or socio-economic circumstances, or suspected child abuse cases.

Register, February, 1978, No. 266

Figure 5

Michigan Definition of Emotionally Impaired

(Michigan Special Education Rules, August 1980)

R 340.1706 Determination Of Emotionally Impaired

Rule 6. (1) The emotionally impaired shall be determined through manifestation of behavioral problems primarily in the affective domain, over an extended period of time, which adversely affect the person's education to the extent that the person cannot profit from regular learning experiences without special education support. The problems result in behaviors manifested by 1 or more of the following characteristics:

(a) Inability to build or maintain satisfactory interpersonal relationships within the school environment.

(b) Inappropriate types of behavior or feelings under normal circumstances.

(c) General pervasive mood of unhappiness or depression.

(d) Tendency to develop physical symptoms or fears associated with personal or school problems.

(2) The term "emotionally impaired" also includes persons who, in addition to the above characteristics, exhibit maladaptive behaviors related to schizophrenia, autism, or similar disorders. The term "emotionally impaired" does not include persons who are socially maladjusted unless it is determined that such persons are emotionally impaired.

(3) The emotionally impaired shall not include persons whose behaviors are primarily the result of intellectual, sensory, or health factors.

(4) A determination of impairment shall be based on data provided by a multidisciplinary team which shall include a comprehensive evaluation by both of the following:

(a) A psychologist or psychiatrist.

(b) A school social worker.

(5) A determination of impairment shall not be based solely on behaviors relating to environmental, cultural, or economic differences.

References

Almond, P., Rodgers, S. & Krug, D. Mainstreaming: A Model for including elementary students in the severely handicapped classroom. Teaching Exceptional Children, Summer, 1979, 11(4), 135-139.

Balow, B. Research on Autism and Childhood Schizophrenia, pp. 241-261. In J. E. Gilliam (Ed.), Autism, Springfield, IL: Charles Thomas, 1981.

Bartak, L. & Rutter, M. Differences between mentally retarded and normally intelligent autistic children. Journal of Autism and Childhood Schizophrenia, 1976, 6, 109-120.

Carlberg, C. & Kavale, K. The efficacy of special versus regular class placement for exceptional children: A meta-analysis. Journal of Special Education, 1980, 24, 295-309.

Corbett, J. Medical management. In L. Wing (Ed.), Early childhood autism: Clinical, educational and social aspects. New York: Pergamon Press, 1976.

Creak, E. M. Schizophrenic syndrome in childhood: Further progress report of a working party. Developmental Medicine and Child Neurology, 1964, 6, 530-535.

DeMeyer, M. K., Churchill, D. W., Pontius, W. & Gilkey, K. M. A comparison of five diagnostic systems for childhood schizophrenia and infantile autism. Journal of Autism and Childhood Schizophrenia, 1971, 1, 175-189.

Deno, E. Instructional alternatives for exceptional children, Reston, Va., Council for Exceptional Children, 1972.

Dunlap, G., Kogel, R. L. & Egel, A. L. Autistic children in school, Exceptional Children, April, 1979, 45(7), 552-558.

Furlong, A. D. The heterogeneity of autistic children. In C. K. Lowry, K. Quinn & M. A. Stewart, Serving autistic children within a large rural area: A resource manual. Iowa City, Iowa, University of Iowa, n.d.

Helge, D. Final report of the national research project. Murray State University, Kentucky Center for Innovation and Development, October 1979.

Helge, D. Problems in implementing comprehensive special education programming in rural areas. Exceptional Children, 1981 47(7), 514-520.

Kavale, K. Functions of the ITPA: Are They Trainable? Exceptional Children, 1981, 47, 496-510.

Kozloff, M.A. Reaching the autistic child: A parent training program. Champaign, Illinois: Research Press, 1973.

Lotter, V. Social adjustment and placement of autistic children in Middlesex: A follow-up study. Journal of Autism and Childhood Schizophrenia, 1974, 4, 11- .

Lovaas, O. I., Schreibman, L. & Koegel, R. A behavior modification approach to the treatment of autistic children. In E. Schopler & R. Reichler (Eds.), Psychopathology and Child Development, New York: Plenum Press, 1976.

Lowry, C. K., Quinn, K., & Stewart, M. A. Serving autistic children within a large rural area: A resource manual, Iowa City, Iowa: The University of Iowa, n.d.

Ornitz, E. M., & Ritvo, E. R. The syndrome of autism: A critical review. American Journal of Psychiatry, June 1976, 133(6), 609-621.

Rimland, B. Infantile autism. New York: Appleton-Centry-Crofts, 1964.

Rimland, B., Callaway, E., & Dreyfus, P. The effect of high doses of vitamin B_6 on autistic children: A double blind cross over study. American Journal of Psychiatry, 1978, 135(4), 472-475.

Rutter, M. Diagnosis and definition of childhood autism. Journal of Autism and Childhood Schizophrenia, June 1978, 8(2), 139-161.

Rutter, M. Concepts of autism: A review of the research. In S. Chess & A. Thomas (Eds.), Annual progress in child psychiatry and child development. New York: Brunner/Mazel, 1969.

Rutter, M., & Lockyer, L. A five to fifteen year follow-up study of infantile psychosis: I. Description of sample. British Journal of Psychiatry, 1967, 113(1), 169.

Schopler, E., Reichler, R., & Lansing, M. Individualized assessment and treatment for autistic and developmentally disabled children (Vols. I & II) Baltimore, MD.: University Park Press, 1980.

Schopler, E., Rutter, M., & Chess, S. Editorial: Change of journal scope and title. Journal of Autism and Developmental Disorders, March 1979, 9(1), 1-10.

Stuecher, U. Tommy: A treatment study of an autistic child. Reston, Va. Council for Exceptional Children, 1972.

Torrey, E. F., Hersch, S. P., & McCabe, K. D. Early Childhood psychosis and bleeding during pregnancy: A prospective study of gravid women and their offspring. Journal of Autism and Childhood Schizophrenia, 1975, 5, 287- .